

ANALYSIS OF CENTRAL VALLEY PROJECT OPERATIONAL ALTERNATIVES
BUREAU OF RECLAMATION / WESTERN AREA POWER ADMINISTRATION
SUMMARY OF RATE INPUTS - ILLUSTRATED IN DOLLARS PER MEGAWATT-HOUR
FORECAST PERIOD - 2005 THROUGH 2019

COST CATEGORY	[1] 2005	[2] 2006	[3] 2007	[4] 2008	[5] 2009	[6] 2010	[7] 2011	[8] 2012	[9] 2013	[10] 2014	[11] 2015	[12] 2016	[13] 2017	[14] 2018	[15] 2019
A. GRID MANAGEMENT CHARGE (1):															
- CONTROL AREA SERVICES	\$0.570	\$0.587	\$0.604	\$0.622	\$0.641	\$0.660	\$0.680	\$0.701	\$0.722	\$0.743	\$0.765	\$0.788	\$0.812	\$0.836	\$0.862
- INTER-ZONAL SCHEDULING	\$0.321	\$0.331	\$0.341	\$0.351	\$0.362	\$0.373	\$0.384	\$0.395	\$0.407	\$0.419	\$0.432	\$0.445	\$0.458	\$0.472	\$0.486
- ANCILLARY SERVICES & REAL-TIME ENERGY OPERATIONS	\$1.082	\$1.114	\$1.147	\$1.182	\$1.217	\$1.254	\$1.291	\$1.330	\$1.370	\$1.411	\$1.453	\$1.497	\$1.542	\$1.588	\$1.636
B. TRANSMISSION SERVICE RATES (2):															
- LOCAL COMPONENT	\$2.318	\$2.387	\$2.459	\$2.532	\$2.608	\$2.687	\$2.767	\$2.850	\$2.936	\$3.024	\$3.115	\$3.208	\$3.304	\$3.403	\$3.505
- REGIONAL COMPONENT	\$1.627	\$1.676	\$1.727	\$1.778	\$1.832	\$1.887	\$1.943	\$2.001	\$2.062	\$2.123	\$2.187	\$2.253	\$2.320	\$2.390	\$2.462
C. ANCILLARY SERVICE RATES (3):															
- SPINNING RESERVE	\$8.193	\$7.898	\$8.228	\$8.701	\$9.138	\$9.617	\$10.061	\$10.888	\$11.444	\$12.035	\$12.530	\$12.551	\$13.050	\$13.568	\$14.108
- NON-SPINNING RESERVE	\$7.355	\$7.091	\$7.387	\$7.812	\$8.204	\$8.634	\$9.033	\$9.776	\$10.275	\$10.805	\$11.250	\$11.268	\$11.716	\$12.182	\$12.666
- REPLACEMENT RESERVE	\$8.633	\$8.323	\$8.670	\$9.169	\$9.629	\$10.134	\$10.602	\$11.474	\$12.059	\$12.682	\$13.204	\$13.225	\$13.751	\$14.298	\$14.866
- REGULATION	\$19.747	\$19.038	\$19.832	\$20.972	\$22.026	\$23.180	\$24.250	\$26.245	\$27.585	\$29.008	\$30.202	\$30.251	\$31.454	\$32.704	\$34.004
D. TRANSMISSION CONGESTION RATES (4):															
- CALIFORNIA-OREGON INTERTIE	\$9.054	\$9.325	\$9.605	\$9.893	\$10.190	\$10.496	\$10.811	\$11.135	\$11.469	\$11.813	\$12.167	\$12.532	\$12.908	\$13.296	\$13.695
E. RELIABILITY SERVICES (5)	\$2.276	\$2.345	\$2.415	\$2.487	\$2.562	\$2.639	\$2.718	\$2.800	\$2.884	\$2.970	\$3.059	\$3.151	\$3.245	\$3.343	\$3.443
F. DEVIATION COSTS (6)	\$5.687	\$5.483	\$5.712	\$6.040	\$6.343	\$6.676	\$6.984	\$7.558	\$7.944	\$8.354	\$8.698	\$8.712	\$9.059	\$9.419	\$9.793
G. UNACCOUNTED FOR ENERGY (7)	\$0.742	\$0.764	\$0.787	\$0.810	\$0.835	\$0.860	\$0.886	\$0.912	\$0.939	\$0.968	\$0.997	\$1.027	\$1.057	\$1.089	\$1.122
H. NEUTRALITY CHARGE (8)	\$0.032	\$0.035	\$0.038	\$0.041	\$0.044	\$0.048	\$0.051	\$0.056	\$0.060	\$0.065	\$0.070	\$0.076	\$0.082	\$0.088	\$0.095
I. GRID OPERATIONS CHARGE (9)	\$0.011	\$0.012	\$0.012	\$0.013	\$0.013	\$0.014	\$0.014	\$0.015	\$0.016	\$0.016	\$0.017	\$0.018	\$0.018	\$0.018	\$0.018

Notes:

- (1) California Independent System Operator (California ISO) Grid Management Charge (GMC) based on the 2002 GMC Settlement. Each component of the GMC is escalated at 3.0% annually over the forecast period.
- (2) Transmission service rates based on the current Transmission Access Charge for northern California. Both the Local and Regional components of Transmission Service are escalated at a rate of 3.0% annually over the forecast period.
- (3) Ancillary Service prices for each service are escalated at an average annual rate of 4.0% over the forecast period.
- (4) Transmission congestion charges for inter-zonal congestion are included for the California-Oregon Intertie (COI). The congestion rate is based on historical congestion costs derived from California ISO information (historical database and/or management reports for period 1999 through 2001). Assumes an annual COI Operating Transfer Capability of 4500 MW with congestion occurring 26% of the total time. The COI congestion rate is escalated at 3.0% annually over the forecast period.
- (5) Reliability Services (RS) charge is based on the Pacific Gas and Electric Company's 2001 RS tariff filing. The RS rate is escalated at 3.0% annually over the forecast period.
- (6) Deviation costs are escalated at an average annual rate of approximately 4.0% over the forecast period.
- (7) Unaccounted for Energy (UFE) rate based on historical UFE charges, derived from California ISO information (historical database and/or management reports for period 1999 through 2001). UFE rates are escalated at 3.0% annually over the forecast period.
- (8) Neutrality charge based on historical Neutrality charges, derived from California ISO information (historical database and/or management reports for period 1999 through 2001). Neutrality charges are escalated at 3.0% annually over the forecast period.
- (9) Grid Operations charge (intra-zonal congestion) based on historical Grid Operations charges, derived from California ISO information (historical database and/or management report for period 1999 through 2001). The Grid Operations charge is escalated at 3.0% annually over the forecast period.